

Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A liquid injection module for a vapor liquid delivery system, said liquid injection module comprising:
 - a liquid injector configured to atomize liquid from a liquid source and inject the atomized liquid;
 - a purging gas provider providing a purging gas to purge from inside the liquid injector liquid from said liquid source that remains inside said liquid injector;
 - a first three-way valve located between said liquid source, said purging gas provider, and said liquid injector, ~~wherein said first three-way valve isolates~~ to control flow between said liquid source, said purging gas provider, and said liquid injector ~~from a process gas~~; and
 - an exhausting branch disposed adjacent said liquid injector, said exhausting branch exhausting redundant liquid from said liquid source that is purged from the liquid injector by said purging gas.
2. (Previously Presented) The liquid injection module according to claim 1, wherein said purging gas is selected from the group consisting of N₂ (nitrogen), CO₂, Ar and He.
3. (Previously Presented) The liquid injection module according to claim 1, further comprising a carrier gas provider to provide a carrier gas that carries said atomized liquid.
4. (Previously Presented) The liquid injection module according to claim 1, wherein said liquid is TMCTS (1,3,5,7, Tetramethylcyclotetrasiloxane ; C₄H₁₆O₄Si₄.)

5. (Previously Presented) The liquid injection module according to claim 1, further comprising a second three-way valve, said second three-way valve used to control flow between said exhausting branch and said liquid injector, wherein said second three-way valve is connected between said exhausting branch, a gas line, and a delivery line, said gas line located between said liquid injector and said second three-way valve.

6-7. (Cancelled)

8. (Currently Amended) A heating injection apparatus for a vapor liquid delivery system in a chemical vapor deposition (CVD) process, said heating injection apparatus comprising:

a liquid injector configured to atomize liquid from a liquid source and inject the atomized liquid;

a purging gas provider providing a purging gas to purge ~~[[out]]~~ from inside the liquid injector liquid from said liquid source that remains inside said liquid injector;

a first three-way valve located between said liquid source, said purging gas provider, and said liquid injector, ~~wherein said first three-way valve isolates~~ to control flow between said liquid source, said purging gas provider, and said liquid injector ~~from a process gas~~;

an exhausting branch disposed adjacent said liquid injector, said exhausting branch exhausting redundant liquid from said liquid source that is purged from the liquid injector by said purging gas; and

a ~~thermostat device~~ heater for heating a carrier gas, said ~~thermostat device~~ heater located between said liquid injector and a carrier gas provider, said carrier gas provider providing said carrier gas to carry said atomized liquid.

9. (Currently Amended) The heating injection apparatus according to claim 8, wherein said purging gas is selected from the group consisting of N₂ (nitrogen), CO₂, Ar and He.

10. (Currently Amended) The heating injection apparatus according to claim 8, wherein said ~~thermostat device~~ heater is selected from the group consisting of a heating coil and an infrared ray.

11. (Cancelled)

12. (Previously Presented) The heating injection apparatus according to claim 8, wherein said liquid is TMCTS (1,3,5,7, Tetramethylcyclotetrasiloxane; $C_4H_{16}O_4Si_4$.)

13. (Previously Presented) The heating injection apparatus according to claim 8, further comprising a second three-way valve connected between said exhausting branch, a gas line, and a delivery line, wherein said gas line is a passageway disposed between said liquid injector and said second three-way valve.

14. (Currently Amended) A heating injection apparatus for a vapor liquid delivery system in a chemical vapor deposition (CVD) process, said heating injection apparatus comprising:

a liquid injector configured to atomize and inject a liquid from a source of liquid;

a purging gas provider providing a purging gas to purge out from inside the liquid injector liquid from said liquid source that remains inside said liquid injector;

a carrier gas provider providing a carrier gas to carry said atomized liquid;

a first three-way valve located between said liquid source, said purging gas provider and said liquid injector, ~~wherein said first three-way valve isolates~~ to control access to pathways between said liquid source, said purging gas provider, and said liquid injector ~~from a process gas~~;

an exhausting branch disposed adjacent said liquid injector, said exhausting branch exhausting redundant liquid from said liquid source that is purged from the liquid injector by said purging gas to prevent polymerization in said liquid injector;

a second three-way valve controlling flow between said exhausting branch and said liquid injector and connected between said exhausting branch, a gas line, and a delivery line, wherein said gas line defines a passage between said liquid injector and said second three-way valve; and

a ~~thermostat device~~ heater located between said liquid injector and said carrier gas provider, said ~~thermostat device~~ heater heating said carrier gas, and said thermostat device is selected from the group consisting of a heating coil and an infrared ray thermostat device.

15. (Previously Presented) The heating injection apparatus according to claim 14, wherein said purging gas is selected from the group consisting of N₂ (nitrogen), CO₂, Ar and He.

16. (Previously Presented) The heating injection apparatus according to claim 14, wherein said liquid is TMCTS (1,3,5,7, Tetramethylcyclotetrasiloxane; C₄H₁₆O₄Si₄.)

17. (Withdrawn) A method for a heat injection apparatus for a vapor liquid delivery system, said method comprising the steps of:

providing a liquid source;

purging out said liquid source remained inside a liquid injector by a purging gas;

atomizing said liquid source to be an atomized liquid source after step of said purging out;

injecting said atomized liquid source into a gas line;

exhausting said purging gas;

providing a carrier gas;

heating said carrier gas to the demanded production temperature before said carrier gas entering said gas line;

carrying said atomized liquid source through a delivery line into a gas-mixing device by said carrier gas; and

entering said atomized liquid source through a gas-mixing device into a reaction chamber to perform a deposition process.

18. (Withdrawn) The method according to claim 17, wherein said liquid source is TMCTS (1,3,5,7, Tetramethylcyclotetrasiloxane; $C_4H_{16}O_4Si_4$).

19. (Withdrawn) The method according to claim 17, wherein said purging gas is selected from the group consisting of N_2 (nitrogen), CO_2 , Ar and He.

20. (Withdrawn) The method according to claim 17, wherein said carrier gas is He (helium).

21. (Withdrawn) The method according to claim 17, wherein the thermostat device of said heating said carrier gas comprises a heating coil.

22. (Withdrawn) The method according to claim 17, wherein the thermostat device of said heating said carrier gas comprises an infrared ray device.